

TECHNICAL MANUAL

COMMUNICATIONS - ELECTRONICS (C - E)

DEPOT SUPPORT

(ATOS)

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SECTION I

GENERAL

1-1 PURPOSE.

This technical order (TO) sets up the depot maintenance support program for ground Communications Electronic (C-E) systems, Space and Warning Systems, and equipment in operational use and logistically supported by Air Force Material Command (AFMC), Air Intelligence Agency (AIA) and Air Force Technical Applications Center (AFTAC).

1-2 APPLICABILITY.

This TO applies to all Air Force activities and non Air Force agencies logistically supported by the Air Force, such as Interservice Agencies, and Foreign Military Sales countries. It applies to ground C-E systems and equipment except for civil engineering, medical, vehicular, and data processing equipment and parts managed under the AF-300 series directives. The program planning and scheduling procedures contained here are mandatory for systems and equipment listed in table 2-1. Unlisted systems and equipment managed or supported by AIA and AFTAC may be exempt at their option because of security classification, limited use, or small inventory consideration.

1-3 DEFINITION OF TERMS.

The following terms used in this technical order are defined here. For a more complete listing of terms and definitions, refer to TO 00-20-1, Section VI. In some cases, the terms listed below are defined as to their application to the repair of C-E systems and equipment.

1-3.1 Air Force Cryptologic Support Center (AFCSC). The Air Intelligence Agency (AIA) activity which acts as a Technology Repair Center (TRC) for cryptologic equipment.

1-3.2 Air Force Technical Applications Center (AFTAC) Mission Equipment. Special Electronic Equipment (SEE) and Atmospheric Research Equipment (ARE) for which the AFTAC has SPM/IM responsibility.

1-3.3 Communications-Electronics (C-E) Equipment. See AFDIR 33-121.

1-3.4 Cryptologic Equipment. Cryptographic and associated devices and special communications intercept equipment used in Air Force communication and electronic systems. Throughout this technical order, cryptologic equipment refers only to

cryptologic devices used in communication-electronic systems and only to those items in National Stock Class (NSC) 5810 and 5811 and other NSC items with management aggregation codes CA, CI, and CS.

1-3.5 Cyclic Exchange. The exchange of an asset, scheduled for Programmed Depot Maintenance (PDM), with a like serviceable asset prior to its removal from operation.

1-3.6 Communication-Electronics Schedule Review (CESR). An annual review hosted by OO-ALC/LHCF in coordination with the major commands. The purpose is to identify and validate the C-E programmed depot maintenance requirements and out year schedule for the next budget year and the next four fiscal out-years. The review will also identify how and where these requirements will be performed.

1-3.7 Depot Maintenance Interservice Support Agreement (DMISA). An agreement whereby one service accomplishes depot maintenance work for another service. These requirements are submitted via AFTO Form 227.

1-3.8 Depot Management Activity. The term depot management activity used in this technical order applies to the SPM/IM of the Air Logistics Center (ALC), the AFCSC, or the AFTAC having the responsibility for the logistic support of assigned systems and equipment.

1-3.9 Emergency Maintenance Support. Those requirements of such an urgent nature that repair cannot be delayed. Equipment or systems are inoperative and active missions have failed.

1-3.10 Engineering Assistance. Assistance required to resolve structural, component, or system deficiencies that cannot be resolved through maintenance assistance. Engineering assistance may be in conjunction with or separate from maintenance assistance.

1-3.11 Equipment Specialist (ES). The person responsible for the logistics management of any given electronic system. Provides technical support, makes decisions on acquiring spares and the management and repair level. Develops work specifications for maintenance repair requirements, and serves as technical representative in negotiations with commands, IMs and other agencies.

1-3.12 Item Manager (IM). An individual responsible for computing the total requirements needed to support a given system. These requirements are met by purchase of new assets or cycling unserviceable assets through repair at the TRC or a contractor plant.

1-3.13 Maintaining Activity. The activity responsible for performing direct (Organizational and Intermediate) maintenance.

1-3.14 Mechanical/Electrical Mobile Depot Maintenance (MDM). Mechanical/Electrical repair is solely related to system/component deficiencies and repair. This effort is completely independent from Shelter Corrosion Prevention Mobile Depot Maintenance (SCPMDM) which pertains strictly to shelter/antenna corrosion repair. As stated in TO 00-25-108, no electronic/mechanical repairs will be performed by the SCPMDM Teams. All electronic and mechanical repair requests are funded under a separate DMISA through the appropriate System Commodity Program Controller for execution.

1-3.15 Mobile Depot Maintenance (MDM). Programmed depot maintenance accomplished by field teams dispatched to the system or equipment location, or unprogrammed maintenance assistance which is beyond that normally available at the using or maintaining command. The requesting command will certify that the requested maintenance assistance is beyond the capability of the using or maintaining command.

1-3.16 MDM Field Team. MDM field team is a group of individuals assigned to perform depot maintenance assistance at a location other than a depot facility. Field teams will be composed of personnel (Air Force, another service, contractor or combination thereof) possessing the necessary skills, special tools, and equipment to accomplish depot maintenance, or emergency/unprogrammed maintenance assistance at an operating or garrison location.

1-3.17 Out of Cycle Maintenance. Maintenance, which may have been accomplished at another time or originally programmed but conditions dictate it be accomplished on other than the programmed date.

1-3.18 Production Management Specialist (PMS). An individual managing the asset shipment, prediction, funds allocation, program negotiation and management of workloads for C-E equipment.

1-3.19 Programmed Depot Maintenance (PDM). Depot maintenance normally scheduled on a cyclic basis.

1-3.20 Radome. An installed, self-supporting specialized protective covering normally utilized with

electronic equipment antenna systems (T.O. 31-1-69, Section I).

1-3.21 Routine Maintenance Support. Those requirements which exist but do not fall under the category of urgent or emergency.

1-3.22 Shelters. A highly mobile, transportable structure designed for a functional requirement that provides a live-in and/or work-in capability. For depot maintenance purposes, the shelter repair has been broken out into two categories as defined by DoD 4151.18-H. These categories are:

1-3.22.1 Category 7 - Common Use Ground Communication Electronics (GCE) Equipment. Category 7 shelters are electronically integrated shelters that have ground communications-electronics equipment installed inside. Tobyhanna Army Depot has been designated as the source of repair for category 7 shelters.

1-3.22.2 Category 14 - Other. Requirements for category 14 are all those that are not related to, and fall outside of, the category 7 definition of GCE. Category 14 shelters are rigid wall shelters not having ground communications-electronic equipment installed. Examples are avionics maintenance shelters, mobile debriefing facilities, and medical hospital shelters. Ogden Air Logistics Center has been designated the source of repair for category 14 rigid wall shelters.

1-3.23 Source of Repair. This term applies to a maintenance activity which maybe an AFMC or ESC technology repair center, a contractor, an interservice or interagency support activity, or an established maintenance facility of a maintaining command.

1-3.24 System Program Manager (SPM). The activity assigned maintenance engineering and logistics management responsibility for a weapon or support system. This management responsibility also applies to installed and support items that are peculiar to the system.

1-3.25 Technical Assistance. The providing of advice and assistance pertaining to installation, operation and maintenance of equipment.

1-3.26 Technology Repair Center (TRC). A functional entity with an organic source of repair capability which accomplishes indirect maintenance on a specific group of items.

1-3.27 Unprogrammed Depot Maintenance. Depot maintenance requirements that could not be forecasted or programmed.

1-3.28 Urgent Maintenance Support. Requirements which are unexpected in nature and could not be foreseen. The main difference between this requirement and an emergency is response time. Although the equipment is not inoperative, a mission impacting problem exists that must be resolved in a timely manner.

1-3.29 Centralized Repair Activity (CRA) see AFI 21-116. A repair facility established at a forward location to perform "off equipment" maintenance on specified equipment or systems. CRAs are established normally to support a geographical region to improve timeliness of repair actions. Centralizing specialized test equipment and repair facilities at CRAs may be the most economical maintenance concept. When established, CRAs assume some depot workload.

1-4 POLICY.

Many maintenance concepts are necessary for successful logistics support of C-E systems and equipment due to multicommand usage, security classification, operational environment, and economic considerations. The following statements give specific policy for depot maintenance support of ground CE systems and equipment.

1-4.1 The objective is to assure that the most reliable, timely and cost effective means of support are used to maintain C-E systems and equipment. The AIA, AFTAC or AFMC production management specialists are responsible for planning the depot maintenance program to assure logistic support of assigned equipment. Air Force depot maintenance resources include both TRC and mobile activities which have been named sources of repair and are authorized to do depot maintenance in support of the SPM/IM.

1-4.2 Preventive and cyclic maintenance requirements are based on a five (5) year (upcoming year and four (4) out-years) forecast. The program is reviewed annually at the Communications-Electronics Schedule Review (CESR) by the depot management activity (appropriate ALC) in conjunction with the using and maintaining commands. As a result of the annual review, firm schedules and repair sources will be established for depot maintenance of C-E systems and equipment.

1-4.3 Urgent/Emergency depot maintenance and technical assistance certified as mission essential by the using or maintaining command C-E staff office, will be provided by the responsible depot management activity under the agreed terms with the requesting command. Urgent/Emergency maintenance shall not be used to perform routine or cyclic depot maintenance.

1-4.4 Depot maintenance programs and plans must be set up to support centralized repair activities (CRAs) when established by MAJCOMs in accordance with AFI 21-116.

1-5 FORMS.

The forms referenced in this technical order are exempt from Reports Control Symbol (RCS) requirements.

1-6 RESPONSIBILITIES.

1-6.1 HQ USAF/ILM/Directorate of Installations and Logistics will:

1-6.1.1 Set up policy and assign command and activity responsibilities for depot maintenance support of ground C-E systems and equipment.

1-6.1.2 Review and approve C-E systems and equipment to be indefinitely supported by contract.

1-6.1.3 Review and approve all plans for duplication or development of industrial facilities.

1-6.2 Air Force Materiel Command (AFMC), for designated C-E systems and equipment, Air Intelligence Agency, for cryptologic equipment, and AFTAC, for designated mission equipment, will:

1-6.2.1 Develop wholesale logistics support concepts, programs, and plans to provide depot support during the operational life cycle of designated systems and equipment. With the exception of electronic security systems that are managed by Oklahoma City Air Logistics Center (OC-ALC/LIAB) within AFMC, Ogden Air Logistics Center (OO-ALC) has lead responsibility for the C-E depot maintenance program and conducts the annual CESR in coordination with OC-ALC and WR-ALC and the major commands. For a specific weapon system breakout, see Table 2-1.

1-6.2.2 Through designated depot management activities:

1-6.2.2.1 Establish and maintain centralized system/item management for assigned ground C-E systems and equipment.

1-6.2.2.2 Establish and maintain a depot repair capability for mission essential equipment.

1-6.2.3 Develop, budget, fund, and contract with commercial or interservice facilities to accomplish those depot requirements that are not designated for Air Force organic maintenance support.

1-6.2.4 Provide unprogrammed depot maintenance and technical assistance to using and maintaining command activities on maintenance and modification programs when requested and determined to be essential or beyond the maintaining command capability.

1-6.2.5 Develop and maintain Mobile Depot Maintenance (MDM) organic and contract field teams to accomplish on site depot maintenance at operating locations when determined to be more responsive to the requirement and to be cost effective.

1-6.2.6 Determine the need and application of the Maintenance Data Collection (MDC) System, the Reliability Centered Maintenance Program (RCMP), and the Material Deficiency Reporting (MDR) System, in coordination with the using and maintaining commands.

1-6.2.7 Analyze data to find areas needing improvements to meet performance requirements, to reduce support costs, and to increase reliability and maintainability. When systems or equipment are exempt from the formal RCMP, conduct periodic reviews of the programmed maintenance inspections and requirements with the using and maintaining activities to assure that requirements are current and valid and to provide optimum support to the operational mission. These reviews are normally accomplished during the annual Communications-Electronics Schedule Review (CESR), but may be held separately by mutual agreement to resolve problems on specific systems or equipment. The general guidelines of the RCMP should be used in conducting these reviews.

1-6.3 738 Engineering Installation Squadron (738/EIS) will:

1-6.3.1 Provide maintenance and technical assistance for copper core and fiber-optic cable, antenna systems, supporting command, control, communications, and computers (SC4), for those activities without an organic capability. Maintenance assistance is requested to correct deficiencies identified by the customer which exceed the capabilities of the MAJCOM. Personnel is the prime consideration in determining capability.

1-6.3.2 Provide engineering assistance to resolve problems involving Electromagnetic Interference (EMI) and Electromagnetic Radiation Hazard (EMRH), Electromagnetic Compatibility (EMC) telecommunications, digital and analog circuit analysis, LANs, and system acceptance testing.

1-6.4 Using commands will:

1-6.4.1 Establish and maintain an organic capability to accomplish direct maintenance on assigned C-E systems and equipment.

1-6.4.2 Budget, fund, procure, and contract for total logistics support for commercial and nonstandard command procured equipment which by concept have been designated to be maintained by contract and identified as using command responsibility. (Command Support Equipment.)

1-6.4.3 In conjunction with depot management activity, develop annual depot maintenance support requirements as outlined in section II of this technical order. The commands will provide representation at the annual CESR.

1-6.4.4 Provide command and base level administrative, facility and logistics support of depot field teams performing on-site maintenance or modification work. This will include providing a knowledgeable representative(s) to assist the on-site MDM team during pre-MDM inspection and MDM action. Support arrangements are negotiated between the command or base and the depot management activity as required to provide for services such as MDM visits. As applicable, the support arrangements will provide for:

1-6.4.4.1 Arrangement of housing and messing, as available, in accordance with AFI 32-6005.

1-6.4.4.2 Vehicles and ground petroleum, oil, and lubricants (POL) for efficient movement of MDM personnel and supplies. When base resources are not available to provide vehicle support, the base or host command may budget and arrange for GSA or commercial rental vehicles.

1-6.4.4.3 Base administrative, engineering, maintenance, photography, contractual services and similar organic assistance.

1-6.4.4.4 Communications services needed to coordinate with other activities in solving problems that may arise during the MDM action.

1-6.4.4.5 Packing, crating, and shipping for C-E material that is removed or left over, according to instructions from the IM or PMS.

1-6.4.4.6 Trenching and, if needed, installing conduit where roadways or other hardened areas must be traversed, backfilled, resodded, or painted, and other normal civil engineering maintenance and repair work as specified in the survey document.

1-6.4.4.7 A secure storage area, and government vehicle parking area to prevent pilferage of tools and equipment during nonduty hours.

1-6.4.4.8 Storage, handling, and disposal of hazardous material.

1-6.4.4.9 Supply support when needed by MDM personnel.

1-6.4.4.10 Units to order all support equipment items as requested by the depot, i.e., cherry picker, compressors, etc.

1-6.5 MAJCOMS are responsible for advising subordinate units of the programmed depot maintenance schedules as agreed at the CESR.

1-6.6 Theater commanders will provide theater clearance concurrent with transmittal of request to the responsible depot activity (ALC, the AFCSC, AFTAC, or source of repair). Each theater clearance will contain the following statement: "The work will be accomplished under the provisions of

TO 00-25-108 and such work will be accomplished under the surveillance of the requesting activity." The depot management activity will advise the theater commander of the names of personnel being sent and the mode of travel (reference Foreign Clearance Guide).

SECTION II

PROCEDURES

2-1 PURPOSE.

This section provides guidance for obtaining depot maintenance for C-E systems and equipment. (See Section III for procedures for cable, antenna maintenance, and antenna PMIs.) While these procedures primarily address C-E systems and equipment they may be applicable to cryptologic and AFTAC mission equipment. In some instances specific procedures for cryptologic equipment are included. The exception to the following PDM guidelines is electronic shelters. The scheduling of these workloads is generally accomplished by OO-ALC/LHH in conjunction with the maintaining depot personnel and presented to the operating commands for approval. AFTO FORMS 227, C-E DEPOT MAINTENANCE REQUIREMENTS AND SCHEDULE are not required, but may be utilized by the commands at their discretion. Radome and shelter schedules will be validated during the annual CESR (e.g., the FY02 schedules will be provided at the FY00 CESR). Any follow on changes to the schedules will be coordinated with the concerned unit/command.

2-2 PROGRAMMED DEPOT MAINTENANCE.

C-E systems and equipment requirements for depot maintenance are scheduled to be accomplished in a given fiscal year by contract, MDM or TRC. Schedule for development of the fiscal year PDM program is provided in figure 2-1.

2-2.1 Maintaining commands and the depot management activity will determine requirements by system, equipment or facility and will develop a recommended five year schedule. In the development of requirements, the PDM frequency listed in table 2-1 will be used for general planning purposes and are not mandatory. Careful consideration of all pertinent factors will be used in determining the requirements. Some of the factors to be used in making this judgment are:

2-2.1.1 Present equipment condition.

2-2.1.2 Anticipated future equipment condition as a result of anticipated equipment use, environment, and the maintaining activities maintenance capability.

2-2.1.3 Current equipment maintenance data and history.

2-2.1.4 System and equipment programmed life expectancy.

2-2.1.5 Experience

2-2.2 AFTO Form 227 (figure 2-2) will be prepared by the using or maintaining organization using the instructions in figure 2-3. The prepared AFTO Form 227 will be reviewed by the MAJCOM designated C-E maintenance staff office. The MAJCOM approved AFTO Form 227 will be forwarded to the depot management activity by the first week in January for the requirements in the budget year following the next year. The MAJCOM signature in block 9 will validate that the AFTO Forms 227 reflect projected mission essential depot support requirements in the fiscal quarter and year indicated. The subsequent four out-years will be submitted on general purpose sheets or spreadsheets (see figure 2-4) and will contain information as outlined in figure 2-5. E-mail is the preferred transmission method. In addition, the following information is required in block 7 of the form:

2-2.2.1 Desired paint scheme. See T.O. 36-1-3 or T.O. 31-1-233 for authorized paint schemes. Use only the colors/codes listed in these TOs.

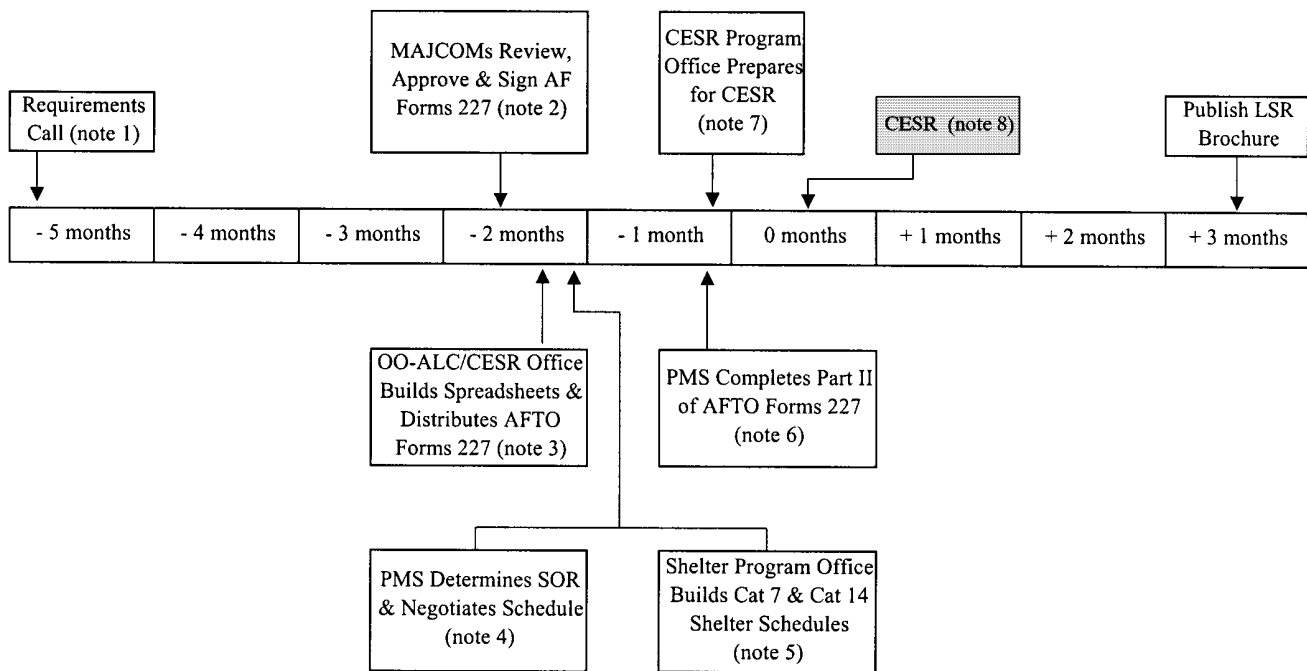
2-2.2.2 Indicate whether or not a joint inspection is desired. For a joint inspection of items being returned to TRC only, the unit will be required to fund an individual TDY to the responsible depot activity, usually for a 7 to 10 day stay, once the equipment is ready for delivery.

2-2.2.3 For shelter/van mounted electronic equipment, indicate if both the shelter/van and the electronics equipment require work.

2-2.3 Depot maintenance requirements will be sent to the responsible ALC. (See table 2-1.)

2-2.4 For Air National Guard (ANG) maintaining activities, requirements are submitted by the Air National Guard Readiness Center (ANGRC). For those ANG activities with full-time operational mission, the ANG will coordinate the recommended PDM schedule with the major command having operational control.

2-2.5 These requirements, as submitted by the maintaining commands, will be consolidated into a fiscal year schedule by the depot management activity. Should a change to the submitted requirements be necessary, the change will be coordinated with the submitting activity.



- Note 1: Requirements call – Approximately five months prior to the CESR, the MAJCOMs will issue a requirements data call to the Chief of Maintenance at the unit level. The requirements call is for the Budget Year (BY) submitted on AFTO Form 227's plus four out year requirements submitted on a spreadsheet IAW T.O. 00-25-108. (See Figure 2-4 for out year requirements sample format).
- Note 2: The MAJCOMs receive the C-E requirements from the Chief of Maintenance, validate and sign the AFTO Form 227s and forward to OO-ALC/LHCF approximately two and a half months prior to the CESR.
- Note 3: The CESR Program Office at OO-ALC/LHCF builds a CESR schedule spreadsheet based on the data from the AFTO Form 227s, assigns a log number to each AFTO Form 227 and distributes the requirements to the applicable ALC and PMS.
- Note 4: The PMS determines the SOR and negotiates the BY schedule with the SOR.
- Note 5: The Tactical Shelter Office, OO-ALC/LHH, builds the Apportionment Year (AY) schedule for Cat 7 and Cat 14 Shelter requirements based on the cyclic schedule and AFTO Form 227s. This schedule is for the upcoming execution year requirements.
- Note 6: The PMS completes Section II of the AFTO Form 227 by indicating the type of depot maintenance action, i.e., PDM or MDM, and the negotiated date for the repair action.
- Note 7: The CESR Program Office updates the CESR Schedule with the PMS's information and provides the MAJCOMs and SORs with a copy of the AY and BY CESR Schedules for requirements submitted via AFTO Form 227's. Barring any changes, these schedules will be reviewed at the CESR.
- Note 8: The CESR date is determined during the DPEM Process Meeting and is generally scheduled to coincide with the Maintenance Requirements Review Board (MRRB). The CESR is scheduled approximately three months before the LSR Brochure is published and furnished to the MAJCOMs, prior to the face-to-face LSR Reviews.

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Figure 2-1. Schedule for Development of FY PDM Program

2-3 COMMUNICATIONS-ELECTRONICS SCHEDULE REVIEW (CESR).

OO-ALC/LHCF will conduct a joint AFMC and supported MAJCOMs CESR during March of each year. The CESR schedule date is set through the Depot Purchased Equipment Maintenance (DPEM) process meeting one year in advance.

2-3.1 This review will:

2-3.1.1 Validate the PDM requirements for each quarter in the upcoming fiscal year and one out-year. The approved PDM schedule includes the results of the maintaining command and depot management activity negotiations and those PDM requirements identified by the appropriate manager.

2-3.1.2 Identify the source of repair for workload accomplishment. Any changes to the source of repair will be in accordance with AFI 21-102.

2-3.1.3 Allow negotiations of maintenance requirements that, because of priority or resource considerations, could be deferred to the following year.

2-3.1.4 Result in recommendations for changes to table 2-1.

2-3.2 Using the five-year plan submitted by the maintaining commands, the depot management activity will provide, at the CESR, the following:

2-3.2.1 A next budget year schedule for like systems or equipment.

2-3.2.2 Tentative approval of the schedule by the source of repair.

2-3.3 Prior to the Logistics Support Review (LSR), the depot management activity will have:

2-3.3.1 Formally assigned the total workload to the schedules with the identified sources of repair.

2-3.3.2 Developed and negotiated interservice and interagency support agreements for appropriate workloads.

2-3.3.3 Prepared for distribution the negotiated workload schedule and completed AFTO Forms 227 for all concerned activities.

2-4 UNPROGRAMMED DEPOT MAINTENANCE.

A requirement for depot maintenance which develops after the submission of annual requirements is evaluated by the maintaining command to determine the urgency. The requirement is either:

2-4.1 Submitted as an emergency or urgent maintenance support requirement if the condition and mission impact warrant.

2-4.2 Submitted on AFTO Form 227 as a revision to existing PDM requirements if priority justifies and it is not an emergency or urgent requirement.

2-4.3 Delayed and submitted as part of next year's requirements if it is not an emergency or urgent requirement and a revision to the existing program is not justified.

2-4.4 Submitted as an out of cycle requirement if not an emergency or urgent requirement and the provisions of 2-4.2 and 2-4.3 are not adequate.

2-5 MAINTENANCE ASSISTANCE.

NEW FISCAL YEAR PROGRAM IMPLEMENTATION

When determined by the maintaining command that requirements are beyond their capability, assistance can be obtained through the appropriate ALC. The assistance can either be engineering assistance to resolve equipment deficiencies; or technical information furnished to the site by telecon, message or printed matter or emergency/urgent depot support provided by a depot field team. When emergency/urgent depot support is furnished, it will be treated as a priority task and will be given the appropriate precedence related to other workloads. See figure 2-6 for requesting emergency/urgent depot support, or figure 2-7 for requesting engineering or technical assistance.

2-5.1 Except as follows, the initial contact for either type of maintenance will be by DSN with follow-up FAX or E-MAIL through the maintaining command headquarters. The MAJCOM will first attempt to resolve the problem using MAJCOM resources.

2-5.1.1 Requests for depot support of cryptologic systems and equipment will be submitted to HQ AFMC/LGM.

2-5.1.2 Antennas, including open wire type and rotatable log periodic, will be submitted through the appropriate MAJCOMS to 738 EIS/DOO with info to OO-ALC/LHCF in accordance with paragraph 2-5.1.

2-5.1.3 For organically maintained base telephone cable and wire distribution systems including meteorological equipment cables and fiber optic cables, the contact for maintenance support will be the appropriate MAJCOMS to 738 EIS/DOO with info to OO-ALC/LHCF in accordance with MAJCOM directives.

2-5.1.4 Requests for depot support of electronic security equipment will be submitted to OO-ALC/LIA with a copy to ESD/AVJ.

2-5.2 The recipient of a request for maintenance support will inform the submitting command of the intended course of action within eight hours of receipt of the request.

2-5.3 When contract support is required, the operating/maintaining activity is required to appoint a Contract Project Officer in accordance with AFI 21-102 and a Quality Assurance Representative (this may be the same individual). If it is known initially that on-site contract support is needed, the initial request should include the names of the Contract Project Officer and Quality Assurance Representative. Otherwise, these names will need to be provided by follow-up message when the site is informed that contractor MDM is required.

2-5.4 Emergency Depot Level Maintenance (EDLM) requests procedures:

2-5.4.1 Units call the MAJCOM for EDLM support.

2-5.4.2 The wing validates the request and the applicable contract and makes the call to the ALC.

2-5.4.3 The site follows up their request by message or email according to figure 2-6.

2-5.5 Requests for support of Radomes will be submitted through MAJCOMS to OO-ALC/LHCF/LHH/TIPS. Reference TO 31-1-69.

2-5.6 Request for support of C-E Shelters will be submitted through MAJCOMS to OO-ALC/LHCF/LHH.

2-6 DEPOT MAINTENANCE WORKLOAD SCHEDULING.

2-6.1 The designated source of repair for a specific workload (PDM or emergency maintenance) will negotiate with the maintaining command to verify and finalize dates. When firm dates are established, the source of repair will provide them to the appropriate production manager.

2-6.2 Mobile depot maintenance (MDM) activities will also negotiate such things as pre-MDM inspection, site access, site security, downtime, special support equipment and material availability, transportation, quarters and messing for the field team, etc.

2-6.3 The designated source of repair and using and maintaining commands will exert every reasonable effort to adhere to the PDM schedule. Should a change be required (or anticipated), all involved activities will be advised of the reason for change and the proposed new schedule.

2-7 MOBILE DEPOT MAINTENANCE.

When on-site MDM is designated, the requesting activity will ensure all pertinent factors in paragraph 2-2.1 are considered. When MDM is necessary, the following will be accomplished:

2-7.1 Pre-MDM Survey.

2-7.1.1 The Pre-MDM survey is normally conducted three months prior to MDM schedule. The survey will be accomplished in sufficient time prior to the MDM to allow for procurement of material and arrangements for the needs of the MDM team.

2-7.1.2 The maintaining activity will provide a representative to participate in the survey and to coordinate support arrangements.

2-7.1.3 The survey will be documented on AFTO FORM 216, PRE-MOBILE DEPOT MAINTENANCE (MDM) SURVEY RECORD AND CERTIFICATION (figure 2-8). The pre-MDM team chief will document all discrepancies during the survey. Discrepancies determined to be organizational maintenance items will be listed on a separate attachment and brought to the attention of the local unit representative during the survey. It shall be made clear that the MDM visit will not correct discrepancies determined to be organizational maintenance items. Budgetaries developed from the survey will not include organizational maintenance items. It will be completed in four copies by instructions in figure 2-9, and distributed as follows:

2-7.1.3.1 One copy of the AFTO Form 216 and attachments will be provided to the maintaining activity chief of maintenance before departure.

2-7.1.3.2 The second copy of the AFTO Form 216 and attachments will be provided to the MDM activity after maintenance and before departure.

2-7.1.3.3 The third copy will be provided to the depot management activity.

2-7.1.3.4 The fourth copy will be sent to the MAJCOM approval authority. Included will be a budgetary for the anticipated costs of the MDM. The MAJCOM official will either approve in whole, in part, or disapprove the MDM. Results of the review will be forwarded to the depot management activity within ten working days of receipt of the original package.

2-7.1.3.5 The maintaining activity and the MDM activity will each reproduce and distribute additional copies within and according to their respective command requirements, with one copy being sent to the Depot Production Management Specialist (PMS).

2-7.2 MDM Job Data Documentation. MDM field teams are responsible for providing inputs to the maintaining activity for entry into the Core Automated Maintenance System (CAMS) in accordance with TO 00-20-2 and AFCSM 21-556, unless exempted. The maintaining activity will document these inputs and enter the data into the CAMS system.

2-7.3 Inspection and Acceptance of MDM. Inspection and acceptance of MDM work will be the joint responsibility of the commander of the operating organization or designated representative and the MDM team chief. In accordance with T.O. 31-1-69, Section I, Paragraph 1-29 W -- A limited inspection must be conducted on Radomes.

2-7.3.1 The maintaining activity (or a designated representative) will determine the operational condition of the system or equipment as related to the original depot maintenance requirement and will accept the work.

2-7.3.2 Inspection and acceptance will be documented on AFTO FORM 217, CERTIFICATION OF MOBILE DEPOT MAINTENANCE ACCOMPLISHED (figure 2-10) in accordance with the instructions in figure 2-11 and distributed as follows:

2-7.3.2.1 One copy of the AFTO Form 217 and attachments will be provided to the maintaining activity chief of maintenance after maintenance and before departure.

2-7.3.2.2 The second copy of the AFTO Form 217 and attachments will be provided to the MDM activity.

2-7.3.2.3 The MDM activity will send one copy to the Production Management Specialist (PMS).

2-7.3.2.4 The PMS will forward a copy of the completed AFTO Form 217 and attachments to the MAJCOM approval authority.

2-7.3.3 Exceptions identified on the AFTO Form 217 will be corrected expeditiously by the responsible activity (as determined before the AFTO Form 217 is finalized). Status on such items will be documented as corrected or, if not corrected, documentation will be at least quarterly. Status documentation will receive the same distribution as the AFTO Form 217.

2-8 PACKAGING, HANDLING, SHIPPING, AND TRANSPORTATION (PHS&T).

Requirements for inventory cyclic exchange assets and mobile and tactical equipment are contained in TO 00-35D-2. It is the inherent responsibility to the lowest level to protect and transport government equipment and material from damage that may occur during handling, shipping, and transporting. AFMCI 24-201, Packaging and Materials Handling Policies and Procedures outline the basic requirements required; as stated in paragraph 11.3 when dealing with different DoD agencies specific requirements will be written within the DMISA. Shipping will be in accordance with TO 00-85-38 and AFMAN 23-110 Repairable Evacuation Procedures.

2-9 INDUCTION.

Induction of assets will be in accordance with the Principle/Agent DMISA contract while dealing with other DoD agencies. The production management specialist will negotiate requirements during the CESR. The item manager will be responsible for computing the total requirements needed to support given systems. The equipment specialist will be responsible for the logistics management of a given electronic system. Requirements for inventory cyclic exchange assets, mobile assets and tactical equipment are contained in the TO 00-35D-2. Program managers of certain major end items have control of configuration and ultimate responsibility to ensure maintenance is accomplished.

C-E DEPOT MAINTENANCE REQUIREMENTS AND SCHEDULE				
I. TO BE COMPLETED BY THE MAINTAINING COMMAND				
1. MAINTAINING COMMAND		2. PROGRAM FY		3. TYPE SUBMISSION <input type="checkbox"/> ANNUAL <input type="checkbox"/> REVISION
4. PREPARING INDIVIDUAL				
a. NAME OF PREPARING INDIVIDUAL	b. GRADE	c. OFFICE SYMBOL	d. AUTOVON	e. PHONE
5. EQUIPMENT INFORMATION				
a. EQUIPMENT LOCATION (<i>Base Name, State or Country</i>)	b. SRAN	c. MAINTAINING UNIT	d. HOST COMMAND	
6. EQUIPMENT REQUIRING REPAIR				
a. NATIONAL STOCK NUMBER	b. JETDS OR TYPE NUMBER AND NAME		c. SRD	d. SYSTEM SERIAL NO.
7. DESCRIPTION OF REQUIREMENTS, EQUIPMENT CONDITION, ETC.				
8. SIGNATURE (<i>Chief of Maintenance</i>)		ACTIVITY	PHONE	DATE
9. SIGNATURE (<i>MAJCOM Validation</i>)		ACTIVITY	PHONE	DATE
10. PROGRAM ELEMENT CODE (<i>PEC</i>)	11. FACILITY CODE		12. REQUIRED SUPPORT DATE FISCAL QTR/YEAR	
II. TO BE COMPLETED BY THE RESPONSIBLE ALC				
13. RESPONSIBLE ALC ALC/MM	14. TYPE DM ACTION APPROVED	15. APPROVED SCHED DATE	16. DESIGNATED SOURCE OF REPAIR	
17. PROGRAM CONTROL NO. (PCN)	18. ESTIMATED COST	19. PMS SIGNATURE		DATE
III. TO BE COMPLETED BY SOURCE OF REPAIR				
20. PRE MDM				
a. SCHEDULED START DATE	b. ESTIMATED COMPLETION DATE	c. ESTIMATED MAN-HOURS	d. WORK IDENTIFICATION NUMBER	
21. MDM				
a. SCHEDULED START DATE	b. ESTIMATED COMPLETION DATE	c. ESTIMATED MAN-HOURS		

AFTO FORM 227, 20010102 (EF-V1)

PREVIOUS EDITION IS OBSOLETE

Figure 2-2. AFTO Form 227, C-E Depot Maintenance Requirements and Schedule

1. General:

- a. The AFTO Form 227 is for:
 - (1) The submission of depot maintenance support requirements (including DMISA) by maintaining activities or commands.
 - (2) The processing and distribution of these requirements, by the applicable SPM, to a source of repair.
 - (3) Acceptance and distribution of the initial negotiated work load schedule, by the source of repair.
- b. All entries on the form must be typed or neatly and clearly printed. Ensure all data on all copies is clearly and easily readable. Separate forms will be used for each item of equipment reported.
- c. Data entered by each activity must be restricted to the blocks and columns specified for their use. Other spaces must be left blank for use by other processing activities.

2. Preparation of AFTO Form 227:

- a. The maintaining activity will complete Section I and forward to their MAJCOM for validation. Section II will be completed by the responsible ALC. Section III will be completed by the source of repair.
- b. Data entered in columns must correspond with all data in the heading blocks.
- c. Instructions for the completion of specific blocks and columns.
 - (1) Block 1. Enter symbol and name of the maintaining command.
 - (2) Block 2. Indicate the fiscal year in which the requested maintenance support is programmed or will be needed (e.g., "94").

NOTE

AFTO Forms 227 will be submitted for the upcoming year only. Out-year requirements will be submitted electronically on a spreadsheet or on a general purpose form (see sample figure 2-4).

- (3) Block 3. Requirements submitted in conjunction with each fiscal year's annual program will be identified as "annual" submissions. Subsequent additions or changes for the same fiscal year program will be identified as revisions.
- (4) Block 4a, b, c, and d. Name of preparing individual should be the technician familiar with the system or the work center supervisor.
- (5) Block 5a, b, c, and d. Self-explanatory.
- (6) Block 6a, b, and d. Self-explanatory. Block 6c. Enter the Standard Reporting Designator (SRD) code. (These are located in CAM/REMIS. An example of this would be AN/TPS-75.)

Figure 2-3. Instructions for Completion of AFTO Form 227 (Sheet 1 of 2)

- (7) Block 7. Explain the request for equipment overhaul. Do not request depot maintenance solely because of elapsed time since last overhaul. Give details of system or equipment condition. Examples are: nature and scope of trouble being experienced, resource deficiencies preventing maintaining command accomplishment. State anticipated deterioration of equipment. Indicate if on-site or TRC depot maintenance is desired and if assistance in removing the item is needed. Indicate desired paint scheme per technical order and whether a joint inspection is desired. Avoid ambiguous statements. Explain the situation as though you are convincing a layman you have a problem. The layman may be the one with the final authority for approving or disapproving this requirement. In addition, the following information is also required in block 7:
 - (a) Desired paint scheme. See T.O. 36-1-3 or T.O. 31-1-233 for authorized paint schemes. Use only the colors/codes listed in these TOs.
 - (b) Indicate whether or not a joint inspection is desired. For a joint inspection of items being returned to TRC only, the unit will be required to fund an individual TDY to Source of Repair (SOR), usually for a 7 to 10 day stay, once the equipment comes out of the shop.
 - (c) For shelter/van mounted electronic equipment, indicate if both the shelter/van and the electronic equipment require work.
 - (d) Indicate if an exchange item is required by stating "exchange required", regardless if you request on-site or TRC maintenance. If depot doesn't have on-site capability, the item must be returned to depot for overhaul. If you can function without the item (usually a minimum of 90 days, but can be up to 270 days, depending on the system), then state "no exchange required".
- (8) Block 8. The maintenance chief of the issuing organization will sign in this block to signify the data is correct and to provide a point of contact for the ALC. Also include DSN and date.
- (9) Block 9. Signature, DSN, and date indicating MAJCOM review and approval.
- (10) Block 10. The MAJCOM approving official should input the Program Element Code (PEC).
- (11) Block 11. Not Applicable.
- (12) Block 12. Indicate the Required Support Date. (Consider that the item must be available -not deployed or on an exercise.)
- (13) Block 13 through 21 for ALC and SOR use only.

Figure 2-3. Instructions for Completion of AFTO Form 227 (Sheet 2 of 2)

C-E PROJECTED REQUIREMENTS - 3 January 2001								
USAF/PACAF, Ms Wanda Smith 449-4776								
NSN	SYSTEM EQUIP	SIN	LAST OVER- HAUL	UNIT AND LOCATION	04	05	06	07
5825-04-046-9975	AN/GRN-31	850002	Never	51 CS Osan, KOR			M4	
		770123	T1-97	18 CS Kadena, JA				M4
		850074	M4-91	19 CS Kadena, JA	M4			
		770075	M1-98	35 CS Misawa, JA				M2
		770038	Unknown	35 CS Misawa, JA			M3	
		770119	Never	374 CS Yokota, JA	M3			
5840-01-209-9146	AN/MSQ-T43(V)1	06	T2-94	353 CTS Eielson, AK			T1	
		07	T4-95	353 CTS Eielson, AK		T1		
5840-01-209-9144	AN/MSQ-T43(V)4	015	T4-93	353 CTS Eielson, AK			T1	
		024	T3-96	353 CTS Eielson, AK				T2
		025	T1-96	353 CTS Eielson, AK				T3
5895-01-177-6976	AN/OE-361	26A	T4-98	607 CBCS Cp Humphreys, KO			T2	
		34A	T4-98	607 CBCS Cp Humphreys, KO			T2	
		0035A	M3-96	354 CS Eielson, AK				M3
5820-01-148-3976	AN/TRC-170(V)3	018	T3-98	604 ASOS Cp Red Cloud, KO	T3			
		M10025	T4-94	607 CBCS Cp Humphreys, KO				T3
		M10033	T4-94	607 CBCS Cp Humphreys, KO				T3
		019	T2-93	604 ASOS Cp Red Cloud, KO			T2	

Figure 2-4. Four Out-Years' Requirements Sample Format

1. The four out-years of the five-year recommended schedule submitted by the maintaining commands by 10 June annually will contain the following:
 - a. The header will contain the name of preparing organization with office symbol, the individual's name, grade/rank, phone number, and date of preparation.
 - b. The list of requirements will contain the NSN (if known), type of systems or equipment, serial number, date of last MDM/TRC overhaul, and the FY and quarter PDM is due.
 - (1) The alpha letters M and T are used to indicate the type of PDM: M represents mobile depot maintenance while T represents technology repair center.
 - (2) The numeric suffix indicates the quarter of the fiscal year.
2. The four out-years' schedule will be submitted electronically on a spreadsheet or general purpose sheets. Figure 2-4 provides a sample and to simplify the layout, variations are authorized.
3. Consolidate out-years before forwarding to ALC. (All like equipment together.)

Figure 2-5. Instructions for Preparing Four Out-Years' Requirements

A MESSAGE OR EMAIL, USING THIS FORMAT, WILL BE USED FOR EMERGENCY OR URGENT MAINTENANCE SUPPORT REQUESTS.

NOTE

- Message will be from user to major command, with info to OO-ALC/LHCG/TIPS and the program office.
- Access <http://www.hill.af.mil/LH/pocpage1.htm> for ALC points of contact. If after hours, a copy of the message should go to the LA Alert Office at LA.Customer.Support@hill.af.mil for OO-ALC/TIP support. For Tobyhanna source of repair support after hours, use the after hour duty phone number for TYAD Security division: DSN 795-7550 or commercial (717)895-7550. The fax numbers for backup documentation is DSN 795-7549 or commercial (717)895-7549. This is in accordance with Tobyhanna Mission Directorates Standing Operating Procedure 72.
- If email is used, originator must be the message release authority.

SUBJECT: Request for "Emergency" or "Urgent" Maintenance Support (show both equipment and location).

- (1) Identity of maintaining command requesting support.
- (2) Identity of the equipment by type number, name, National Stock Number (NSN) and serial number; or manufacturer's name and part number, if not type numbered.
- (3) Base where equipment is located.
- (4) Nature of the problem symptoms (operational and technical).
- (5) Corrective measures taken by the maintaining activity and results obtained.
- (6) Statement or estimate of maintenance actions required must be specified.
- (7) Material required to make repairs, if known and status. If required, is replacement on hand?
- (8) Security clearance, special clothing, etc., required or recommended for MDM team members.
- (9) Special tools, test equipment, heavy equipment, facilities, etc., known or thought to be necessary to make repairs, and a statement of availability of these items at or in the vicinity of the operating site.
- (10) Quantity and AFSC of maintaining activity personnel available to assist or augment the MDM team.
- (11) Availability of transportation, messing and billeting for the MDM or field team while at the operating site or in the vicinity.
- (12) Date that assistance is required. Statement of operational impact of the problem and urgency of repair.
- (13) Statement that the required maintenance exceeds the capability of the maintaining unit.
- (14) Date and time that initial request for maintenance support was made (if emergency request) and person contacted. See paragraph 2-5. L.

Figure 2-6. Format for Requesting Emergency/Urgent Support (Sheet 1 of 2)

- (15) Name, grade, organization, email address, and DSN of individual making the initial telephone request (if emergency or urgent request).
- (16) Name, grade, organization, email address, and DSN of individual for field team contact.
- (17) Name, grade, organization, email address, and DSN of individual accepting the initial telephone request (if emergency or urgent request).
- (18) For contract support only: Name, grade, email address, and DSN of individual named as Project Officer.
- (19) For contract support only: Name, grade, email address, and DSN of individual named as Quality Assurance Representative.

NOTE

Validation: The Major Command or designated subordinate must send a message to OO-ALC/LHCF/TIPS confirming the units need for support.

Figure 2-6. Format for Requesting Emergency/Urgent Support (Sheet 2 of 2)

NOTE

Message or email will be from user to major command with info to OO-ALC/LHCF. If email is used, originator must be the message release authority.

SUBJECT: Request for Engineering or Technical Assistance. (Show both, equipment, and location).

- (1) Identity of maintaining command request support.
- (2) Identity of the equipment by type number, name, National Stock Number (NSN) and serial number; or manufacturer's name and part number, if not type numbered.
- (3) Name and location (state or country) of base where equipment is located.
- (4) Nature of the problem.
- (5) Actions taken by the maintaining activity and results.
- (6) Statement or estimate of assistance required.
- (7) Date that assistance is required.
- (8) Statement that the requirement exceeds the capability of the maintaining unit.
- (9) Date and time that initial telephone request for technical assistance was made (if emergency request).
- (10) Name, grade, organization, and DSN of individual making initial telephone request.
- (11) Name, grade, organization and DSN of individual accepting the initial telephone request.

NOTE

Request for citing problem should be sent to the T.O. 25-108 points of contract, listed on the CESR Web Site at <http://www.hill.af.mil/LH/pocpage1.htm>, from the validating MAJCOM. Requests for engineering assistance to investigate electromagnetic interference (EMI) should be submitted in accordance with AFI 10-707, Spectrum Interference Resolution. Requests for engineering assistance with electromagnetic radiation hazard problems, electromagnetic compatibility problems, telecommunications, digital and analog circuit analysis, LANs, or system acceptance testing should be sent to 738 EIS/EEE, 801 Vandenberg Ave Suite 234, Keesler AFB MS 39534-2633. DSN 597-4329 Email: first name.last name@keesler.af.mil with info to the T.O. 25-108 POCs.

Figure 2-7. Format for Requesting Engineering and Technical Assistance

PRE-MOBILE DEPOT MAINTENANCE (MDM) SURVEY RECORD AND CERTIFICATION						1. JOB IDENTIFICATION NO.	
2. INSTALLATION NAME AND LOCATION (City, State or Country)						3. PHONE	
4. OPERATING ORGANIZATION			5. NAME AND GRADE OF C-E OFFICER			6. PHONE EXTENSION	
7. ITEM (Name, Type Number, FSC, Mfr Name and Part Number, Serial Number)							
8a. SYSTEM		b. PROJECT			c. FACILITY NUMBER		
9. <input type="checkbox"/> MDM NOT REQUIRED <input type="checkbox"/> MDM REQUIRED AND TO BE PERFORMED BY MDM TEAM. ATTACH A CHECK LIST TO DESCRIBE THE MDM REQUIREMENT IN DETAIL, LISTING ALL OBSERVED DEFICIENCIES/FAULTS WHICH MUST BE CORRECTED, MODIFICATION REQUIREMENTS, ETC.							
10. <input type="checkbox"/> ORGANIZATIONAL AND INTERMEDIATE MAINTENANCE REQUIRED AND TO BE PERFORMED BY OPERATING ORGANIZATION <input type="checkbox"/> PRIOR TO <input type="checkbox"/> DURING SCHEDULED MDM PERIOD. ALL ORGANIZATIONAL AND INTERMEDIATE LEVEL MAINTENANCE REQUIRED SHOULD BE IDENTIFIED IN DETAIL AND ATTACHED TO THIS FORM. IF NEGATIVE, ENTER "NONE REQUIRED".							
11. <input type="checkbox"/> ORGANIZATIONAL AND INTERMEDIATE MAINTENANCE REQUIRED AND TO BE ACCOMPLISHED BY AFCS MDM TEAM. COMMAND CERTIFICATION (AFR 66-14) WILL BE OBTAINED BY OPERATING ACTIVITY AND FURNISHED SM/M NOT LATER THAN 2 WEEKS PRIOR TO MDM SCHEDULED DATE.						ESTIMATED M/H	
12. REQUIRED FACILITIES, SERVICES, CAPABILITIES AND SPECIAL EQUIPMENT TO BE PROVIDED BY THE OPERATING ORGANIZATION/BASE AND AVAILABLE TO MDM TEAM.							
13. SPECIAL FACILITIES, SERVICES, CAPABILITIES, AND EQUIPMENT TO BE PROVIDED BY THE MDM TEAM.							
14. <input type="checkbox"/> REAFFIRMATION THAT CURRENT MDM SCHEDULED DATE IS SUITABLE <input type="checkbox"/> RESCHEDULE OF MDM REQUIRED							
15. PERSONNEL PARTICIPATING IN PRE-MDM SURVEY							
NAME		ACTIVITY		HOME BASE		PHONE EXTENSION	
16. PRE-MDM SURVEY				17. MAN-HOURS EXPENDED DURING MDM SURVEY			
START DATE		COMPLETION DATE		MILITARY		CIVILIAN	
						CTS	
18. PRE-MDM DATA REVIEW AND CONCURRENCE							
MDM TEAM CHIEF (Signature)				OPERATING ORGANIZATION (Signature)			
NAME				NAME			
TITLE				TITLE			
ACTIVITY				ACTIVITY			
DATE				DATE			

Figure 2-8. AFTO Form 216, Pre-Mobile Depot Maintenance (MDM) Survey Record and Certification

1. General:

- a. An AFTO Form 216 will be initiated by the pre-MDM survey team chief for each C-E end item scheduled for pre-MDM survey.
- b. Completion of each form is the primary responsibility of the pre-MDM survey team chief, based upon technical test performed, visual observation of the equipment, and other information/arrangements provided by and developed in conjunction with representatives of the maintaining activity.
- c. If additional space is required to provide sufficient information, enter the words, "See Continuation Sheet," in the last available space of the applicable blocks and use a continuation sheet, identifying by number the block being continued. Staple continuation sheets to this form.

2. Preparation of AFTO Form 216:

- a. Blocks 1, 2, 3, 4, 5, and 8. Items will be filled out by the pre-MDM survey team chief as completely as possible and the forms furnished to the survey team chief prior to departure to accomplish the scheduled survey. Weapon, will be identified by name, nickname, numerical codes, etc.
- b. Blocks 9, 10, and 11. Self-explanatory.
- c. Block 12. Itemize the maintenance capabilities and facilities that the operating organization will provide to assist with the MDM. Include special equipment and services to be provided, such as cranes, riggers, welders, etc., and other support to be made available to the MDM team; i.e., housing, messing, and transportation.
- d. Block 13. List special facilities, services, capabilities and equipment to be provided by the MDM as necessary.
- e. Block 14. Check applicable block to reaffirm compatibility of current MDM schedule date with organizational operations/shutdown periods, weather, special missions, availability of maintenance capabilities, resources, facilities, etc., or to designate if rescheduling of MDM date is required due to incompatibility and/or inability to meet present MDM scheduled date (Note: New schedule date, if required, must be negotiated between MDM activity and the operating activity and the production manager notified of the change.)
- f. Block 15. List as many key participants, as possible within space provided.
- g. Blocks 16 and 17. Self-explanatory.
- h. Block 18. To be completed and signed by the pre-MDM team chief and the commander of the maintaining activity (or a designated representative).

Figure 2-9. Instructions for Completing AFTO Form 216

CERTIFICATE OF MOBILE DEPOT MAINTENANCE ACCOMPLISHED		1. JOB IDENTIFICATION NO.	
2. INSTALLATION NAME AND LOCATION (<i>City, state or country</i>)		3. PHONE (<i>Include Area Code</i>)	
4. OPERATING ORGANIZATION	5. NAME AND GRADE OF C-E OFFICER		6. PHONE EXTENSION
7. ITEM OF EQUIPMENT			
A. NAME	B. TYPE OR PART NO.	C. QUANTITY	
D. FEDERAL STOCK CLASSIFICATION	E. MANUFACTURER	F. SERIAL NUMBER	
8. EQUIPMENT APPLICATION			
A. SYSTEM	B. PROJECT	C. FACILITY NUMBER	
9. ATTACHED CHECKLIST DATED _____ FOR AN _____ HAS BEEN COMPLETED AND ALL DEPOT LEVEL MAINTENANCE HAS BEEN COMPLETED WITH THE FOLLOWING EXCEPTIONS (<i>for completion of the work place</i>)			
10. WORK ACCOMPLISHED (<i>Word Picture</i>) AND LIST OF NON-EXPENDABLE COMPONENTS REPLACED (<i>Use additional sheet if required</i>)			
11. GENERAL OPERATIONAL CONDITION OF EQUIPMENT UPON ARRIVAL AND BRIEF DESCRIPTION OF DEFICIENCIES.		12. NUMBER OF O&M ACTIVITY PERSONNEL FURNISHED TO ASSIST THE MDM TEAM	
13. TOTAL MAN-HOURS EXPENDED		14. TOTAL MAN-HOURS DOCUMENTED ON MDC FORMS	
A. OPERATING AGENCY	B. MDM TEAM	A. OPERATING AGENCY	B. MDM TEAM
15. MDM QUALITY ACCEPTANCE (<i>Name, Title, Signature and Activity of Quality Control Inspector</i>)			
16. PROBLEMS ENCOUNTERED DURING MOBILE DEPOT MAINTENANCE			
17. SCHED DATE OF MDM	18. ACTUAL START DATE OF MDM	19. SCHEDULED COMP DATE OF MDM	20. ACTUAL COMPLETION DATE OF MDM
21. MDM DATA REVIEWED, CONCURRENCE, CERTIFICATION AND ACCEPTANCE OF WORK ACCOMPLISHED			
MDM CHIEF (<i>Name, title and activity</i>)		MDM CHIEF (<i>Signature</i>)	DATE
OPERATING ORGANIZATION (<i>Name, title and activity</i>)		OPERATING ORGANIZATION (<i>Signature</i>)	DATE

AFTO FORM 217, 19740401 (EF-V4)

PREVIOUS EDITION WILL BE USED

Figure 2-10. AFTO Form 217, Certificate of Mobile Depot Maintenance Accomplished

1. General:

- a. If practical the maintaining activity will provide typing support to enter the data; otherwise, it will be handwritten legibly in ink by the MDM Team Chief. Distribute one copy to the production manager who directed or authorized the MDM.
- b. When blocks on the form do not provide sufficient space, use a continuation sheet. Continuation pages will be identified by placing the job identification number (corresponding to Block No. 1) in the upper right corner. Data continued on the page will be identified to the block number being continued. Continuation pages will be numbered consecutively in the lower right corner and stapled to the back of the AFTO Form.
- c. The MDM Team Chief is responsible for the entry of data in Blocks 1-13, 16-20 and the respective signature block. The maintaining activity commander or designated representative is responsible for data in Blocks 14, 15, and the respective signature block.

2. Preparation of AFTO Form 217:

- a. Block 1. Enter number assigned by the MDM activity to identify the job.
- b. Blocks 2 through 6. Pertains to the location of the equipment which was repaired and the activity responsible for its direct (O & I) maintenance.
- c. Blocks 7 and 8. Self-explanatory.
- d. Blocks 9. Enter the date of the checklist used (if any) and list as exceptions, all depot maintenance operations and tasks still required but postponed for accomplishment at a later date. Indicate why these were postponed and estimate when they will be accomplished. Indicate what activity will accomplish these postponed tasks. If lack of material is the reason of the delay, identify the material and indicate what activity will secure it.
- e. Block 10. List only non-expendable components replaced.
- f. Blocks 11 and 12. Self-explanatory.
- g. Block 13. The MDM team chief will maintain a record of all direct man-hours expended by all team personnel (including augmenting personnel) by name, grade, AFSC and assigned activity/command. Block No. 13a. will reflect the direct man-hours expended by team members from the activity being supported (reference Block No. 4 and No. 12). Block No. 13b. will reflect total direct man-hours expended by all team members to date of acceptance and signature.
- h. Block 14. The MDM team chief will provide this data to the maintaining activity representative for entry into the MDC system. Entry of man-hours in Block No. 14a. and b. by the maintaining activity/command representative indicates that this is the man-hour figures which have been or will be entered into the MDC system by this activity or command.
- i. Block 15 through 21. Self-explanatory.

Figure 2-11. Instructions for Completing AFTO Form 217

Table 2-1. Support Systems Equipment

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
<p>This table identifies most C E systems and equipment (columns 1 & 2) subject to programmed depot maintenance or equipment supported thru normal supply channels by the PDM concept where technology of repair center (TRC) of PDM/MDM (column 3) represents the Source of Repair (SOR) by the following:</p> <p style="text-align: center;">M = MDM S = Supply C = Contract D = DMISA</p> <p>Program Office Responsibility (column 4) defines which ALC has System Management responsibility.</p> <p>PDM frequency suggested (column 5) is for general planning purposes only (long range planning of resource requirements and work loads).</p> <p style="text-align: center;">NOTE</p> <p>Months given are not a mandatory period. The using commands may request more or less frequent PDM based on equipment condition, i.e.: More often when erratic or increased failures are occurring, wiring and insulation are brittle and cracked throughout, numerous deployments, extensive corrosion and climatic conditions have resulted in excessive wear and tear; but it may be less often when equipment remains reliable and in good condition; and the command responsible for funding if other than AFMC. The nomenclatures listed below will be used for all PDM/MDM scheduling.</p>					
AN/ARC-96 AN/ARC-171 AN/ARC-208 AN/CYQ-18 AN/FCC-32 AN/FMH-2 AN/FMN-1A AN/FMQ-7 AN/FMQ-8 AN/FMQ-12 AN/FMQ-13 AN/FPN-62 AN/FPN-63 AN/FPQ-21 AN/FPS-6 AN/FPS-16	MILSTAR/Term/ antenna WEATHER WEATHER SOON WEATHER DMS/SESS WEATHER ATCALS 404L ATCALS 404L WEATHER GBS 498L	D, TYAD D, TYAD D, TYAD C D, TYAD C D, TYAD D, TYAD D, TYAD D/M, TYAD D, TYAD D, TYAD OO-ALC OO-ALC OO-ALC	OO-ALC OO-ALC OO-ALC OO-ALC OO-ALC OO-ALC OO-ALC OO-ALC OO-ALC	60	AFWA AFWA AFWA AFWA AFWA

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/FPS-17	GBS 498L	D, TYAD	OO-ALC	N/A	AFWA
AN/FPS-19			OO-ALC		
AN/FPS-20		D, TYAD	OO-ALC		
AN/FPS-30			OO-ALC		
AN/FPS-50			OO-ALC		
AN/FPS-65			OO-ALC		
AN/FPS-67			OO-ALC		
AN/FPS-77		D, TYAD	OO-ALC		
AN/FPS-79			OO-ALC		
AN-FPS-85			OO-ALC		
AN/FPS-90			OO-ALC		
AN/FPS-91A			OO-ALC		
AN/FPS-92			OO-ALC		
AN/FPS-93A			OO-ALC		
AN/FPS-108	GBS	C	OO-ALC	N/A	ESC/SRS
AN/FPS-115/123	GA	D, TYAD	OO-ALC		
AN/FPS-116					
AN/FPS-117	AEWS 968H	D, TYAD	OO-ALC		
AN/FPS-120	GA	D, TYAD	OO-ALC		
AN/FPS-124	AEWS 968H		OO-ALC		
AN/FPS-126		D, TYAD			
AN/FRA-90					
AN/FRC-1913					
AN/FRC-39					
AN/FRC-56					
AN/FRC-96					
AN/FRC-97		D, TYAD			
AN/FRC-109 EXCEPT COMPONENTS					
AN/FRC-109 COMPONENTS					
AN/FRC-117		D/M			
AN/FRC-126					

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/FRC-127 (MW-503)					
AN/FRC-178	GPS	D/M, TYAD	OO-ALC		
AN/FRC-181	MILSTAR/Term/ antenna	D/M, TYAD	OO-ALC		
AN/FRC-184	MILSTAR/Term/ antenna	D/M, TYAD	OO-ALC		
AN/FRC-194	MILSTAR/Term/ antenna	D/M, TYAD	OO-ALC		
AN/FRN-43	ATCALs 404L	D/M, TYAD	OC-ALC		
AN/FRN-44	ATCALs 404L	D/M, TYAD	OC-ALC		
AN/FRN-45	ATCALs 404L	D/M, TYAD	OC-ALC		
AN/FRR-95	SESS 433L	D, TYAD	OO-ALC		
AN/FRR-97		D, TYAD			
AN/FRR-98		D			
AN/FSA-4	ATCALs 404L	D/M	OC-ALC		
AN/FSC-78	Milsatcom/DSCS	D, TYAD	OO-ALC		
AN/FSC-97	Milsatcom/SCTIS	D, TYAD	OO-ALC		
AN/FSC-111	Milsatcom/ISST	D, TYAD	OO-ALC		
AN/FSC-125 SCAMP Fixed	MILSTAR		OO-ALC		
AN/FSQ-114		D			
AN/FSQ-173	Milsatcom/NABS		OO-ALC		
AN/FSS-7 (ELECTRICAL)					
AN/FSS-7 (MECHANICAL)					
AN/FTC-18					
AN/FXQ-4	Range Threat 806L	C	OO-ALC		
AN/FXQ-4A	Range Threat 806L	C	OO-ALC	60	
AN/FYG-8					
AN/FYH-2(V)					
AN/FYK-10					
AN/FYK-13					
AN/FYQ-93	AEWS 968H	D, TYAD	OO-ALC		

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/FYQ-141	MILSTAR	C	OO-ALC		
AN/GGC-47V (DSP)					
AN/GGC-55					
AN/GGC-57					
AN/GGR-3					
AN/GIC-21V (DSP)					
AN/GKA-17(V)					
AN/GKC-1V (DSP)	DSP		OO-ALC		
AN/GMD-2					
AN/GMQ-20	WEATHER 433L	D, TYAD	OO-ALC		AFWA
AN/GMQ-32	WEATHER 433L	D, TYAD	OO-ALC		AFWA
AN/GMQ-33	WEATHER 433L	D, TYAD	OO-ALC		AFWA
AN/GMQ-34	WEATHER 433L	D/C, TYAD	OO-ALC		AFWA
AN/GPA-30					
AN/GPA-73					
AN/GPA-122					
AN/GPA-123	ATCALs 407L	D, TYAD	OC-ALC		
AN/GPA-124	GBS 498L		OO-ALC		
AN/GPA-125					
AN/GPA-127					
AN/GPN-12	ATCALs 407L	D/M, TYAD	OC-ALC	60	
AN/GPN-20	ATCALs 407L	D/M, TYAD	OC-ALC	60	
AN/GPN-22	ATCALs 407L	D/M, TYAD	OC-ALC	60	
AN/GPN-25	ATCALs 407L	D/M, TYAD	OC-ALC	36	
AN/GPA-39					
AN/GPA-81					
AN/GPA-83					
AN/GRA-115					
AN/GRA-116					
AN/GRC-155A (MRC-107)					
AN/GRC-171	493L	D, TYAD	WR-ALC		
AN/GRC-175	493L	D, TYAD	WR-ALC		

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/GRC-195					
AN/GRC-203/ D-BRITE		D, TYAD			
AN/GRC-206	493L	D, TYAD	WR-ALC		
AN/GRC-239	Radio	D, TYAD	WR-ALC		
AN/GRC-211	Radio	D, TYAD	WR-ALC		
AN/GRC-212	HFGCS 802L	D/M/S, TYAD	OC-ALC		
AN/GRC-221					
AN/GRC-224	HFGCS 802L	D/M	OC-ALC		
AN/GRC-244		C	OC-ALC		AMC
AN/GRN-29	ATCALs 404L	D/M, TYAD	OC-ALC	60	
AN/GRN-30	ATCALs 404L	D/M, TYAD	OC-ALC	60	
AN/GRN-31	ATCALs 404L	D/M, TYAD	OC-ALC	60	
AN/GRN-32	ATCALs 404L	D/M, TYAD	OC-ALC	60	
AN/GRR-23/24		D/M, TYAD	WR-ALC		
AN/GRR-32 (URG651F)		D/M	WR-ALC	36	
AN/GRQ-27	WEATHER	D/C			AFWA
AN/GRT-21/22		D/M, TYAD	WR-ALC		
AN/GRT-31 (205J-1)	HFGCS 802L	D/M	OC-ALC		
AN/GRT-32 (208U-3)	HFGCS 802L	D/M, TYAD	OC-ALC	36	
AN/GRT-33 (208U-10)	ATCALs 404L	D/M, TYAD	OC-ALC	36	
AN/GSA-91					
AN/GSA-135	ATCALs 404L	D/M	OC-ALC	60	
AN/GSC-39	Milsatcom/DSCS	D, TYAD	OO-ALC		
AN/GSC-40	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/GSC-42	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/GSC-43	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/GSC-44	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/GSC-47					

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/GSC-49	Milsatcom/DSCS	D, TYAD	OO-ALC	60	
AN/GSC-51	Milsatcom/DSCS		OO-ALC		
AN/GSC-52	Milsatcom/DSCS	D/M, TYAD	OO-ALC		
AN/GSC-54	Milsatcom/NABS		OO-ALC		
AN/GSC-63	Milsatcom/DSCS		OO-ALC		
AN/GSC-64	Milsatcom/ AFsatcom		OO-ALC		
AN/GSH-34	Telecom 494L	D	OO-ALC		
AN/GSH-36	Telecom 494L	D	OO-ALC		
AN/GSH-56	Telecom 494L	D, TYAD	OO-ALC		
AN/GSH-57	Telecom 494L	D, TYAD	OO-ALC		
AN/GSH-58	Telecom 494L	D, TYAD	OO-ALC		
AN/GSH-35 56/5.10	Telecom 494L		OO-ALC		
AN/GSN-12	ATCALs 404L	D/M, TYAD	OC-ALC		
AN/GSQ-120					
AN/GSQ-170 W)					
AN/GSQ-175 (DSP)	DSP		OO-ALC		
AN/GSQ-235	AEWS 968H	C	OO-ALC		
AN/GSR-36					
AN/GSR-42	Milsatcom/SCTIS		OO-ALC		
AN/GSS-34					
AN/GSS-40					
AN/GSS-41					
AN/GSS-44					
AN/GSS-45	GA		OO-ALC		
AN/GTC-28					
AN/GXQ-15					
AN/GYH-3 (DSP)	DSP		OO-ALC		
AN/GYH-5 (DSP)	DSP		OO-ALC		
AN/GYK-18 (v)					
AN/GYK-21 (DSP)	DSP		OO-ALC		
AN/GYK-24 (DSP)	DSP		OO-ALC		
AN/GYQ-17 (DSP)	DSP		OO-ALC		

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/GYQ-18 (DSP)	DSP	D, TYAD	OO-ALC		
AN/GYQ-22 (DSP)	DSP		OO-ALC		
AN/LST-5C	Milsatcom/ AFsatcom		OO-ALC		
AN/MGC-2B					
AN/MGC-6					
AN/MLQ-T4	Range Threat 806L	D, TYAD	OO-ALC	60	
AN/MPN-14	ATCALs 404L	D/M, TYAD	OC-ALC	60	
AN/MPQ-T3	Range Threat 806L	D, TYAD	OO-ALC	60	
AN/MPS-T1 (COMPONENTS) CONSISTING OF:	Range Threat 806L	D, TYAD	OO-ALC	60	
OK-251 CONTROL VAN		D, TYAD		60	
E-F BAND RT UNIT		D, TYAD		60	
G BAND RT UNIT		D, TYAD		60	
I BAND RT UNIT		D, TYAD		60	
AN/MPS-11					
AN/MPX-7					
AN/MRC-8					
AN/MRC-85					
AN/MRC-113					
AN/MRC-116					
AN/MSQ-46					
AN/MSQ-66	Milsatcom/DSCS		OO-ALC		
AN/MSQ-T43	Range Threat 806L	D, TYAD	OO-ALC	60	
AN/MSQ-2					
AN/MSQ-10					
AN/MSQ-118	DSP	D, TYAD	OO-ALC		
AN/MSQ-120	DSP	D, TYAD	OO-ALC		
AN/MSR-T4	Range Threat 806L	D, TYAD	OO-ALC	60	
AN/MST-T1A	Range Threat 806L	D, TYAD	OO-ALC	60	
AN/MST-TI(V)	Range Threat 806L	D, TYAD	OO-ALC	60	

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/PPS-5	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/PPS-15		D, TYAD			
AN/PRC-GPB					
AN/PRC-128					
AN/PRC-47					
AN/PRC-66B					
AN/PRC-77		D, TYAD			
AN/PRC-104					
AN/PRC-113		D, TYAD			
AN/PSC-3		D, TYAD			
AN/PSC-5		D, TYAD			
AN/PSC-11 SCAMP Mobile		D, TYAD			
AN/TCC-76					
AN/TCC-77					
AN/TCM-604B/ TERRACOM					
AN/TGC-14V					
AN/TGC-20					
AN/TGC-26					
AN/TGC-27					
AN/TGC-28					
AN/TMQ-15	WEATHER 433L	D, TYAD	OO-ALC		AFWA
AN/TMQ-24	WEATHER 433L	D, TYAD	OO-ALC		AFWA
AN/TMQ-34	WEATHER 433L	D, TYAD	OO-ALC		AFWA
AN/TMQ-35		D, TYAD			
AN/TMQ-36	WEATHER 433L	D, TYAD	OO-ALC	60	AFWA
AN/TPQ-36		D, TYAD			
AN/TPQ-37		D, TYAD			
AN/TPQ-43	Range Threat 806L	D, TYAD	OO-ALC		
AN/TPQ-45		D, TYAD		36	
AN/TPN-19	ATCAL5 404L	D/M, TYAD	OC-ALC		

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/TPS-39	GTACS 407L	D, TYAD	OO-ALC	48	
AN/TPS-43E		D, TYAD			
AN/TPS-63		D, MARINE			
AN/TPS-75		D, TYAD			
AN/TPT-TI(V)		D, TYAD			
AN/TPX-42		D/M, TYAD			
AN/TPX-49		D, TYAD			
AN/TPX-54		D, TYAD			
AN/TRC-61		D, TYAD	WR-ALC	60	
AN/TRC-66A					
AN/TRC-68					
AN/TRC-87					
AN/TRC-96					
AN/TRC-97					
AN/TRC-136					
AN/TRC-139 (COMPONENTS)					
AN/TRC-144					
AN/TRC-170	493L Radio	D, TYAD	WR-ALC		
AN/TRC-170 V2	493L Radio	D, TYAD	WR-ALC		
AN/TRC-170 V3	493L Radio	D, TYAD	WR-ALC		
AN/TRC-176	493L Radio	D, TYAD	WR-ALC		
AN/TRC-179(V)1		D, TYAD			
AN/TRC-194	Milstar	D, TYAD	OO-ALC		
AN/TRN-26	ATCALS 404L	D/M, TYAD	OC-ALC	60	
AN/TRN-41	ATCALS 404L	D/M, TYAD	OC-ALC	60	
AN/TRN-42	ATCALS 404L	D/M	OC-ALC		
AN/TSC-54	Milsatcom/DSCS		OO-ALC		
AN/TSC-57					
AN/TSC-73					
AN/TSC-85B	Milsatcom/NABS	D, TYAD	OO-ALC		
AN/TSC-88	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/TSC-93B	Milsatcom/NABS	D, TYAD	OO-ALC		

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/TSC-94A	Milsatcom/GMF	D, TYAD	OO-ALC		
AN/TSC-100A	Milsatcom/GMF	D, TYAD	OO-ALC		
AN/TSC-110			WR-ALC		
AN/TSC-129	Milsatcom/ AFsatcom		OO-ALC		
AN/TSC-107		D, TYAD			
AN/TSC-154	MILSTAR		OO-ALC		
AN/TSM-109					
AN/TSQ-96					
AN/TSQ-111	Telecom 494L	D, TYAD	OO-ALC		
AN/TSQ-146	Telecom 494L	D, TYAD	OO-ALC		
AN/TSQ-180	MILSTAR		OO-ALC		
AN/TSQ-201	Telecom 494L		OO-ALC		
AN/TTC-32					
AN/TTC-39A	Telecom 494L	D, TYAD	OO-ALC		
AN/TTC-42	Telecom 494L		OO-ALC		
AN/TYC-10					
AN/TYC-39	Telecom 494L	D, TYAD	OO-ALC		
AN/TYQ-11V					
AN/TYQ-13V					
AN/TYQ-14V					
AN/TYQ-23	GTACS 407L	D, TYAD	OO-ALC		
AN/UGC-88					
AN/UGC-129	Telecom 494L	D, TYAD	OO-ALC		
AN/UGC-141	Telecom 494L	D, TYAD	OO-ALC		
AN/UMQ-12	WEATHER	C			AFWA
AN/UMQ-15	WEATHER	C			AFWA
AN/UPA-35					
AN/UPA-59A	GBS 498L		OO-ALC		
AN/UPA-59B	GBS 498L		OO-ALC		
AN/UPA-62	GBS 498L		OO-ALC		
AN/UPQ-3					
AN/UPX-6	GBS 498L		OO-ALC		

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
AN/UPX-14	GBS 498L	D, TYAD	OO-ALC	48	
AN/UPX-21	GBS 498L		OO-ALC		
AN/UPX-23	GTACS 407L	D, TYAD			
AN/UPX-27	GTACS 407L	D, MARINE			
AN/URC-56C 492L (JACKPOT)	Radios	D, TYAD	WR-ALC		
AN/URC-119		D, TYAD	WR-ALC		
AN/USC-28	Milsatcom/DSCS	D, TYAD	OO-ALC		
AN/USC-39	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/USQ-69	Milsatcom/ AFsatcom	D, TYAD	OO-ALC		
AN/USQ-115	MILSTAR	D, TYAD	OO-ALC		
AN/UYK-9				60	
AN/UYQ-23V2	Milsatcom/ AFsatcom		OO-ALC		
AN/VRC-83		D, TYAD			
AN/VPQ-1 (TRTG)	Range Threat 806L	D, TYAD	OO-ALC		
427M					
465L					
474L (BMEWS)	GA		OO-ALC		
484N (CHARLIE SYSTEM)					
493L (SECURE VOICE)					
496L (SPACE TRACK)					
498L (GREEN PINE)				OO-ALC	
A/E37G-1 (MOBILE)					
A/E37G-1 (FIXED)					
AFSCN/CUE	AFSCN	C	OO-ALC		
ALPHA NET					
DEB-CROSS CHANNEL					

Table 2-1. Support Systems Equipment - Continued

[illegible]

Table 2-1. Support Systems Equipment - Continued

System Equipment	Weapon System	TRC of PDM/ MDM	Program Office Responsibility	Suggested PDM Frequency	MAJCOM Responsible for Funding
OE-361	Milsatcom/GMF/ NABS	D, TYAD	OO-ALC	36	
OJ-314	ATCAL5 404L	D/M, TYAD	OC-ALC		
OK-171	WEATHER	D, TYAD D, TYAD D, TYAD			AFWA
OK-172					
RECORDER/ REPRODUCER					
RED ANALOG SWITCH					
RVR-400					
SATELLITE TERMINAL EQUIP					
TACSATCOM, (UHF, SHF, MODEMS)					
WECO 7A & 7B SOS					
302 KEY SYS					
MISC ANTENNAS					
CABLES (TELEPHONE PLANT)	WEATHER	S			AFWA
WSR-88D					

SECTION III

CABLE, ANTENNA AND ANTENNA PMI PROGRAM

3-1 PURPOSE.

This section provides guidance for obtaining Engineering Installation (EI) maintenance and technical assistance for cable and antenna systems to activities that do not have organic maintenance capability.

3-1.1 The system supported by EI are underground, buried, and aerial copper core and fiber-optic cables, antennas which are not an integral part of an end-item (e.g. radar or instrument landing system antennas).

3-1.2 The following systems are not supported by EI:

3-1.2.1 Intersite (ICBM) cable systems. These systems are maintained in accordance with TO 00-25-108 by the missile system manager at Ogden Air Logistics Center (OO-ALC).

3-1.2.2 Antenna systems supporting contractor maintained facilities (e.g. Land Mobile Radio Systems).

3-1.2.3 Nonstandard, foreign manufactured, non-supportable, contractor maintained, or prototype systems.

3-1.2.4 Towers / poles, except those identified as integral parts of supported systems.

3-1.2.5 Base Intrusion Security Systems, except the copper core and fiber-optic communication cable portions.

3-1.3 Categories of Requirements:

3-1.3.1 Emergency. Those requirements of such an urgent nature that repair cannot be delayed. Those conditions which involve inoperative aircraft control and warning. ATCALS facilities, and vital communication links without backup. Equipment condition is Red.

3-1.3.2 Urgent. Requirements, which are unexpected in nature and could not be foreseen. Although the condition is not red, a serious mission degradation exists that must be resolved in a timely manner. Includes systems operating on backup.

3-1.3.3 Routine. Those requirements with minimal mission impact, but which are beyond the capability of the operating activity / MAJCOM.

3-1.4 Development, Submission, Validation, Certification, and Processing of Requirements. Requirements are normally identified at unit level.

They are documented and submitted on AFTO FORM 229, MAINTENANCE REQUIREMENTS, VALIDATIONS, AND ACCOMPLISHMENT (figure 3-1). Operating units will submit requirements to their MAJCOM focal point. The MAJCOM will review, validate, and certify the requirement as necessary and beyond the capability of the MAJCOM. If validated, MAJCOM will then submit documentation to 738 EIS/DOO. Non-validated requests will be returned to originators.

3-1.5 Responsibilities:

3-1.5.1 The Requesting unit will:

3-1.5.1.1 Submit message request (in AFTO Form 229 format) to MAJCOM focal point with information copies to 738 EIS/DOO. Complete AFTO Form 229 prior to team arrival. The date time group of the MAJCOM validation message will be cited in Section 113.

3-1.5.1.2 Designate a unit representative to serve as contact point for the maintenance repair team.

NOTE

For multiple MAJCOM installation, funding should be coordinated through the host MAJCOM prior to request for PMIs from 738 EIS/DOO.

3-1.5.1.3 Provide a travel and per diem fund cite for deployment of the maintenance repair team.

3-1.5.1.4 Provide the following support for the maintenance repair team:

3-1.5.1.4.1 Assistance in arranging housing and messing.

3-1.5.1.4.2 Vehicles and ground petroleum, oil, and lubricants (POL) for efficient movement of maintenance personnel and supplies. When base resources are not available to provide vehicle support, the base or host command budgets and arranges for GSA or commercial rental vehicles.

3-1.5.1.4.3 Communication services needed to coordinate with other activities in solving problems that may arise during the maintenance action.

3-1.5.1.4.4 Replacing /repairing conduit, backfilling, resodding, painting, or other normal civil engineering maintenance and repair work as required.

3-1.5.1.4.5 A secure storage area and government vehicle parking area to prevent pilferage of tools and equipment during nonduty hours.

3-1.5.1.5 Provide material as identified by the maintenance team.

3-1.5.1.6 Schedule necessary downtime, if required.

3-1.5.2 The Operating commands will:

3-1.5.2.1 Provide 738 EIS/DOO with a focal point for maintenance actions addressed in this regulation (to include a 24 hour contact point).

3-1.5.2.2 Review, validate, and certify the request from subordinate unit as necessary and beyond the capability of the command.

3-1.5.3 The 738 EIS/DOO will:

3-1.5.3.1 Working with the appropriate engineering activity, if required, determine whether future communications-computer system projects will affect the maintenance action. If approved 738 EIS/DOO will:

3-1.5.3.1.1 Assign a Workload Identification Number (WIN).

3-1.5.3.1.2 Establish a realistic schedule.

3-1.5.3.1.3 Assigns job responsibility to an EI unit.

3-1.5.3.2 If work will be accomplished under C-CS programmed project action, maintenance repair action will be disapproved.

3-1.6 Emergency Procedures. Complete mission failure of vital communication links requires immediate action.

3-1.6.1 Validating MAJCOM will contact the 738 EIS/DOO by telephone followed by official email confirmation. Caller should ensure all information requested on AFTO Form 229 is available.

3-1.6.2 Emergency maintenance will be limited to restoration of service only. If follow-on maintenance is required, the EI team chief will document this in Section IV of the AFTO Form 229 and 738 EIS/DOO will assign an urgent/ routine maintenance WIN.

3-2 OUTSIDE PLANT CABLE MAINTENANCE REQUIREMENTS (CMR)

CMR will not be used in lieu of programming action (AF Form 3215) for short notice requirements or for replacement actions that should have been programmed in accordance with AFI 33 series instructions. If EI engineering and the EI team chief decide replacement is the proper maintenance action, only one for one, pair for pair replacement is authorized.

3-2.1 Engineering Change Requests/Authorization (ECR/A).

3-2.1.1 ECR/A for in-progress cable maintenance or assistance may be used to improve maintainability of outside plant systems provided the cable pair count/operational circuit capability is not increased and additional buildings or sites are not serviced by this cable. Basically, if cable replacement occurs as a maintenance action, only a one for one change out is authorized. Future requirements will not be considered unless an approved CSRD has already been processed and a WIN assigned.

3-2.1.1.1 All or parts of approved programmed requirements may also be included in the maintenance action, when approved by the engineer and when such actions are cost effective. The determination will be made by 738 EIS/DOO in coordination with the engineering activity.

3-2.1.1.2 Where it is cost effective to install a larger count replacement section for a bad cable section, the engineer will note on the ECR/A that the additional pairs are required by project (give the number and approximate installation date).

3-2.1.2 In cases where on-site cable maintenance personnel recommend minor changes in cable plant, replacement action may be continued as a maintenance task through the use of AF Form 1146, Engineering Change Request/Authorization. This task is essentially a change to the base Communication Computer System Installation Records (CSIR) and will not be used to circumvent AFI 33-103 programming actions.

3-2.1.2.1 Limited use of AF Form 1146 for cable maintenance assistance actions is authorized in accordance with AFI 33-104.

3-2.1.2.2 The ECR/A will be initiated by the on-site team chief and will be submitted directly to 738 EIS/DOO. When submission is by message, provide an information copy to the appropriate EI engineer. The ECR/A must reflect supporting rationale when cost effectiveness is cited as the reason for replacement.

3-2.1.2.3 The maintaining activity is required to update the CSIR as a result of any changes generated by ECR/A action. The EI team chief will supply the required information to the requesting agency's chief of maintenance.

3-2.1.3 ECR/A required during emergency cable maintenance will be processed as above, except the required coordination may be accomplished telephonically with the appropriate engineer. Actions and formal documentation not essential to emergency job accomplishment will be followed up by message. Messages will be sent to the appropriate EI team chief's unit.

3-2.2 Implementation and Reporting Requirements:

3-2.2.1 If repair is accomplished without ordering material, the team chief will:

3-2.2.1.1 Obtain the chief of maintenance or accepting official signature in Section VII, Block 2, of the AFTO Form 229.

3-2.2.1.2 Provide one copy of the AFTO Form 229 with attached updated CSIR to the customer.

3-2.2.1.3 Distribute completed documents to responsible EI unit in accordance with local guidance.

3-2.2.2 If material must be procured, the team chief will:

3-2.2.2.1 Provide a list of material required to the customer.

3-2.2.2.2 Complete Section IV of AFTO Form 229.

3-2.2.2.3 Write an informal Statement of Work (SOW) identifying the nature of the job on the AFTO Form 229, Section IV, Block 6.

3-2.2.2.4 Ensure work order numbers are entered on AFTO Form 229, if applicable. (This includes, but is not limited to, base civil engineering work orders, base communications unit job orders, etc.).

3-2.2.2.5 Obtain the chief of maintenance signature in Section IV, Block 8 of the AFTO Form 229 indicating concurrence with proposed fix action. A copy of the form is to be left with the customer.

3-2.2.2.6 Distribute completed documents to the responsible EI unit in accordance with local guidance.

3-2.2.3 The responsible EI unit will submit one copy of AFTO Form 229, with attachments and appropriate documents, to 738 EIS/DOO for engineering review and action.

3-2.2.4 The team will be scheduled for follow-on maintenance when all material arrives on site and required host unit support is complete.

3-2.2.5 When follow-up maintenance is completed the team chief will:

3-2.2.5.1 Obtain the chief of maintenance or accepting official signature in Section VII, Block 2, of the AFTO Form 229.

3-2.2.5.2 Provide one copy of the AFTO Form 229 with attached updated CSIR to the customer.

3-2.2.5.3 Distribute completed documents to the responsible EI unit in accordance with local guidance.

3-3 ANTENNA MAINTENANCE.

Antenna maintenance actions will not be requested or used as a substitute for programming replacement actions (AF Form 3215) in accordance with applicable 33 series instructions.

3-3.1 Implementation and Reporting Requirements:

3-3.1.1 If repair is accomplished without ordering material, the team chief will:

3-3.1.1.1 Obtain the chief of maintenance or accepting official signature in Section VII, Block 2, of the AFTO Form 229.

3-3.1.1.2 Provide one copy of the AFTO Form 229 to the customer.

3-3.1.1.3 Distribute completed documents to the responsible EI unit in accordance with local guidance..

3-3.1.2 If material must be procured, the team chief will:

3-3.1.2.1 Provide a list of material required to the customer.

3-3.1.2.2 Complete Section IV of AFTO Form 229.

3-3.1.2.3 Write an informal Statement of Work (SOW) identifying the nature of the job on the AFTO Form 229, Section IV, Block 6.

3-3.1.2.4 Obtain the chief of maintenance signature in Section IV, Block 8 of the AFTO Form 229 indicating concurrence with proposed fix action. A copy of the form is to be left with the unit.

3-3.1.2.5 Distribute completed documents to the responsible EI unit in accordance with local guidance.

3-3.1.3 The team will be scheduled for follow-on maintenance when all material arrives on site and required host unit support is complete.

3-3.1.4 When follow-up maintenance is completed the team chief will:

3-3.1.4.1 Obtain the chief of maintenance or accepting official signature in Section VII, Block 2, of the AFTO Form 229.

3-3.1.4.2 Provide one copy of the AFTO Form 229 to the customer.

3-3.1.4.3 Distribute completed documents to the responsible EI unit in accordance with local guidance.

3-4 ANTENNA PMI PROGRAM.

This program applies to antennas and antenna supports not maintainable by O&M units (HF, VHF, UHF, Microwave, etc.), excluding real property towers as identified in AFI 32-9005. Units having no organic capability (no AFSC 2E6X1 assigned) are eligible for this program. Antennas that require no climbing are excluded (e.g., most RSU, antennas mounted on rails of control towers, etc.). The purpose of this program is to consolidate and automate management of the antenna PMI program at 738 EIS. This is done by gathering the entire antenna PMI data and establishing a management program within the WMS (current fiscal year plus a one (1) year projection).

3-4.1 Developing Requirements. Each MAJCOM having units which qualify for this program will consolidate their antenna PMI requirements and submit them to 738 EIS/DOO. PMI requirements need be submitted only once, and then updated as changes occur via AFTO Form 229. Requirements will be submitted as follows:

3-4.1.1 By antenna location (e.g. transmitter site, building number, command post, etc.), type, and owning unit.

3-4.1.2 When validated 738 EIS/DOO will:

3-4.1.2.1 Assign a WIN.

3-4.1.2.2 Develop the PMI schedule.

3-4.1.2.3 Assign and task an EI unit.

3-4.1.2.4 Provide a copy of the schedule to the MAJCOM.

3-4.1.2.5 Monitor PMI progress.

3-4.1.3 The customer will:

3-4.1.3.1 Provide technical orders and technical order work cards (PMI cards) for both antennas and unit owned towers.

3-4.1.3.2 Provide supply support for their antenna systems (cable, connectors, spare antennas, etc.).

3-4.1.3.3 Provide two (2) copies of CSIR for EI team use. (The maintaining unit is to forward updated prints to the supporting engineering activity when changes are made.)

3-4.1.3.4 Schedule required host base support in accordance with paragraph 3-1.5.1.4.

3-4.1.3.5 Assign a minimum of one technician to work with the PMI team.

3-4.1.3.6 Schedule necessary downtime.

3-4.1.3.7 Ensure requirements are kept current by resubmitting AFTO Form 229 in accordance with

paragraph 3-1.4. as changes occur (e.g. antennas added, deleted, etc.).

3-4.1.4 Each EI unit will:

3-4.1.4.1 Maintain a current listing of assigned PMIs, to include current copies of the AFTO Form 229. PMI start dates should not be delayed more than 30 working days from the listing. 738 EIS/DOO will be advised by message when the PMI start will exceed this time frame. The message must include the reason for slippage and the earliest date the unit can accomplish the PMI.

3-4.1.4.2 Notify the customer a minimum of 15 working days prior to the scheduled PMI start date (with an information copy to 738 EIS/DOO).

3-4.1.4.3 Perform PMI as scheduled.

3-4.1.4.4 Identify host base support required (e.g., cranes, tools, test equipment, etc.).

3-4.1.5 The EI team chief will:

3-4.1.5.1 Document the PMI in accordance with paragraph 3-4.2.

3-4.1.5.2 If required, update CSIR and provide them to the chief of maintenance.

3-4.1.5.3 Submit all forms in accordance with local guidance.

3-4.2 PMI Documentation.

3-4.2.1 If the antenna PMI does not require follow-on maintenance:

3-4.2.1.1 Complete AFTO Form 229 in accordance with local guidance.

3-4.2.1.2 Upon receipt of the document at 738 EIS/DOO, the antenna PMI WIN is closed.

3-4.2.2 If follow-on maintenance is required, the team chief submits:

3-4.2.2.1 AFTO Form 229 to close PMI.

3-4.2.2.2 List of Material (LOM) (parts list to be ordered and tracked by the customer).

3-4.2.2.3 Informal Statement of Work. The statement of work is a word picture of required work. This should include Base Civil engineering work orders, Base Communications unit job orders, etc.

3-4.2.3 When all parts are received and host support completed the maintaining unit will determine whether to submit a maintenance assist request in accordance with Section III of this technical order or wait for the next scheduled PMI to have parts installed, depending on mission impact.

MAINTENANCE REQUIREMENTS, VALIDATIONS, AND ACCOMPLISHMENT			
I			
1. TYPE OF REQUEST	2. MAINTAINING UNIT	3. LOCATION	4. NAME OF PERSON TO CONTACT/PHONE
5. DESCRIPTION OF PROBLEM (Attach current CE facility drawing record of the entire cable route and termination)			
6. LIST ATTACHED CSIRS			7. CEMPAC CODE
			8. FACILITY CODE
9. RESOURCES LOCALLY AVAILABLE		10. RESOURCES REQUIRED	
A. TECHNICIANS, SKILL LEVEL AND NUMBER	B. MATERIAL VEHICLE AND SPECIAL EQUIPMENT	A. TECHNICIANS, SKILL LEVEL AND NUMBER	B. MATERIAL VEHICLE AND SPECIAL EQUIPMENT
11. DATE ASSISTANCE REQUIRED	12. WILL AUGMENTATION SATISFY THE REQUIREMENT <input type="checkbox"/> YES <input type="checkbox"/> NO	13. SIGNATURE OF UNIT'S VALIDATION/APPROVING OFFICIAL	DATE
IB CERTIFICATION THAT REQUIREMENT IS BEYOND COMMAND DIVISION TOTAL CAPABILITY			
14. COMMAND FOCAL POINT	15. LOCATION	16. SIGNATURE OF UNIT'S VALIDATION/APPROVING OFFICIAL	DATE
II CSC ENGINEERING REVIEW			
1. <input type="checkbox"/> PROCEED <input type="checkbox"/> DO NOT PROCEED	2. REVIEWER'S NAME	OFFICE SYMBOL	PHONE
3. REMARKS			
III FOR CSC USE			
1. WIN	2. EST START DATE OF TEAM PRESURVEY	3. EST COMPLETION DATE OF TEAM PRE-SURVEY	4. EST MANHOURS BY SKILL REQUIRED FOR SURVEY

AFTO FORM 229, 19930901 (EF-V4)

Figure 3-1. AFTO Form 229, Maintenance Requirements, Validations and Accomplishment (Sheet 1 of 2)

IV					
FOR IMPLEMENTING UNIT'S USE					
1. INITIAL START DATE		2. INITIAL COMPLETION DATE		3. FOLLOW-ON MAINTENANCE REQUIRED <input type="checkbox"/> NO <input type="checkbox"/> YES (<i>Attach SOW and LOM</i>)	
				4. IF YES, INDICATE TEAM COMPLIMENT (<i>by number and skill</i>)	
5. TOTAL MANHOURS EXPENDED BY SKILL				6. IF YES, ESTIMATE MANHOURS BY SKILL	
7. ITEMS AND SERVICE REQUIRED FOR FOLLOW-ON MAINTENANCE					
8. TEAM CHIEF SIGNATURE					
DATE		9. CHIEF OF MAINTENANCE SIGNATURE		DATE	
V					
FOR CSC USE IF FOLLOW-ON MAINTENANCE IS REQUIRED					
1. ESTIMATED START DATE FOR FOLLOW-ON MAINTENANCE				2. ESTIMATED COMPLETION DATE FOR FOLLOW-ON MAINTENANCE	
VI					
ENGINEERING REVIEW OF TEAM CHIEF FINDINGS					
1. <input type="checkbox"/> PROCEED <input type="checkbox"/> DO NOT PROCEED		2. REVIEWER'S NAME		OFFICE SYMBOL	
				PHONE	
3. REMARKS					
VII					
TEAM CERTIFICATION OF FOLLOW-ON MAINTENANCE COMPLETION					
1. START DATE		2. COMPLETION DATE		3. MANHOURS EXPENDED BY SKILLS	
				4. SIGNATURE	
VIII					
MAINTAINING UNIT/CMDR ACCEPTABLES					
1. NAME OF ACCEPTING OFFICIAL		DUTY TITLE		GRADE	
				UNIT	
2. SIGNATURE				DATE	
IX					
EXCEPTIONS (<i>If none, so state</i>)					

AFTO FORM 229, 19930901 (EF-V4) (Reverse)

Figure 3-1. AFTO Form 229, Maintenance Requirements, Validations and Accomplishment (Sheet 2 of 2)

1. General:
 - a. The AFTO Form 229 is submitted to obtain Communications System Center maintenance and technical assistance by activities that do not have an organic capability.
 - b. All entries on the form must be typed or neatly and clearly printed. Assure all data on all copies is clearly and easily readable.
 - c. Data entered by each activity must be restricted to the blocks and columns specified for their use. Other spaces must be left blank for use by other processing activities.
 - d. The original copy of the form will be forwarded through all phases of use. Make copies for local use.
2. Preparation of AFTO Form 229:
 - a. Section 1. This is a description of the problem and certification by the requester that this requirement is beyond their organic capability. Complete block as follows:
 - (1) Blocks 1 through 4. Self-explanatory.
 - (2) Block 5. Describe the problem in sufficient detail to enable the engineering activity to understand the problem. Describe what actions you have accomplished to correct the problem. Describe what else you feel should be accomplished to restore the cable / antenna / DCO to service. Enter your best estimate as to the man-hours required of the EI team and your personnel to restore service. Include mission impact statement.
 - (3) Block 6. List the CSIR number of current drawings.
 - (4) Block 7. Leave blank
 - (5) Block 8. Leave blank.
 - (6) Blocks 9A-B. Resources locally available to support work action.
 - (7) Blocks 10A-B. If augmentation will satisfy the requirement, identify resources needed to correct the problem.
 - (8) Blocks 11 through 13. Self-explanatory.
 - b. Section 1B. This is certification that the requirement is beyond the MAJCOM's total organic capability, (e.g., No other organic O&M activity can provide support to the requiring unit.)
 - (1) Block 14. Enter the office symbol of the MAJCOM focal point.
 - (2) Block 15. Self-explanatory.
 - (3) Block 16. If the request was by message, include the validation message date time
 - c. Section II. (To be completed by the 738 EIS engineering review activity.)
 - (1) Blocks 1 and 2. Self-explanatory.
 - (2) Block 3. List problem or programmed actions which will affect the maintenance action. Make recommendations as appropriate.
 - d. Section III. (To be completed by 738 EIS.)
 - (1) Block 1. Assign WIN.
 - (2) Block 2. Enter estimated month and year.
 - (3) Block 3. Enter estimated month and year.
 - (4) Block 4. Self-explanatory.

Figure 3-2. Instructions for Completing AFTO Form 229 (Sheet 1 of 2)

- e. Section IV. (To be completed by the EI team chief.)
 - (1) Blocks 1 through 5. Self-explanatory.
 - (2) Block 6. Provide estimated hours to return system to technical order specifications.
 - (3) Block 7. In case of emergencies (cut cables, etc.), a quick fix may require additional material and work to restore the repaired cable to technical order specifications. Prepare a statement of work and a list of materials.
- f. Section V. Completed by 738 EIS if follow-on maintenance is Required/Approved.
 - (1) Block 1. Based on estimated date material will be available on site and/or if required complete allied support.
 - (2) Block 2. Use estimated total man-hours provided by EI team chief.
- g. Section VI. Engineering review of team chief's findings.
 - (1) Blocks 1 and 2. Same as Section II.
 - (2) Block 3. Enter results of the review of Statement of Work (SOW), List of Materials (LOM) and Communications-Computer Systems Installation Record (CSIR) requirements and provide recommendations / remarks, etc.
- h. Section VII. (To be completed by the EI team chief.)
 - (1) Block 1 through 4. Self-explanatory.
- i. Section VIII. The signature in this block constitutes O&M certification that maintenance is completed and acceptable.
 - (1) Blocks 1 and 2. Self-explanatory.
- j. Section IX. Self-explanatory.

Figure 3-2. Instructions for Completing AFTO Form 229 (Sheet 2 of 2)